
DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Listing the Madison Cave Isopod as a Threatened Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines the Madison Cave Isopod (*Antrolana lira*) to be a Threatened species. This action is being taken because this species, which is restricted to a single cave and adjacent fissure in Augusta County, Virginia, is threatened by vandalism and mercury pollution. The rule provides protection to wild populations of this species.

DATE: This rule becomes effective on November 3, 1982.

ADDRESSES: Questions concerning this action may be addressed to: Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

FOR FURTHER INFORMATION CONTACT: For further information on this final rule, contact Mr. John L. Spinks, Jr., Chief, Office of Endangered Species (703/235-2771).

SUPPLEMENTARY INFORMATION:

Background

On October 6, 1980, the Service published a proposed rule in the **Federal Register** (45 FR 86410-86411) advising that sufficient evidence was on file to support a determination that the Madison Cave isopod was a Threatened species pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). That proposal summarized the factors thought to be contributing to the likelihood that the Madison Cave isopod could become Endangered within the foreseeable future. The earliest known collection of the Madison Cave isopod was made on August 23, 1958, by Dr. Thomas Barr of the University of Kentucky. The species was described and named in 1964 (*International Journal of Speleology*, Vol. 1, pp. 229-236 and plates) by Dr. Thomas E. Bowman of the Smithsonian

Institution. This species has been found only in three small pools of water in Augusta County, Virginia (Holsinger, 1979). Two of these pools are in Madison Cave and the other is in a small nearby fissure. This unique species is the only member of the genus *Antrolana*. Madison Cave has considerable historical significance. The continued existence of this species is threatened by human visitation to the cave and mercury pollution in the South River (Bolgiano, 1980). The proposed rule also specified the prohibitions which would be applicable if such a determination were made, and solicited comments, suggestions, objections, and factual information from any interested person. Included in this proposal was a summary of the status of this species.

A recent study of the Madison Cave isopod (Collins, 1982) has added much to our knowledge of the natural history of this species and confirmed the threats outlined in the Service's proposal of Threatened status for the species.

The Madison Cave isopod was proposed as a Threatened species on January 12, 1977, in a publication in the *Federal Register* (42 FR 2507-2515). That proposal was withdrawn on December 10, 1979 (44 FR 70796-70797) as a result of changes in listing procedures directed by the 1978 amendments to the Endangered Species Act. Subsequent to the withdrawal, the Service received oral communications from the owner of Madison Cave on the condition of the cave and from Dr. John Holsinger of Old Dominion University on the results of his then recent field studies. Also subsequent to the withdrawal, the Service received a report on mercury contamination of the South River (Bolgiano, 1980) which has underground connections with the pools that are the habitat of the Madison Cave isopod. This report and these communications provided significant new information on which the Service's reproposal of Threatened status for the Madison Cave isopod on October 6, 1980 (45 FR 66410-66411) was based.

A letter was sent to Governor Dalton of the Commonwealth of Virginia on October 8, 1980, notifying him of the proposed rulemaking for the Madison Cave isopod. On October 6-10, 1980, letters were sent to appropriate Federal agencies, local governments and other interested parties notifying them of the proposal and soliciting their comments and suggestions. Official comments were received from the Office of the Secretary of Commerce and Resources of the Commonwealth of Virginia and the Office of the Chief of Engineers of the Department of the Army.

Summary of Comments and Recommendations

In the October 6, 1980, *Federal Register* proposed rule (45 FR 66410-66411) all interested parties were invited to submit factual reports or information which might contribute to the formulation of a final rule.

All public comments received during the period October 6, 1980, through January 5, 1981, were to be considered.

A comment from the Office of the Secretary of Commerce and Resources of the Commonwealth of Virginia, on behalf of Governor Dalton, acknowledged the receipt of the proposal and stated that it had been forwarded to the appropriate State officials. No further comments were received from the State.

Office of the Chief of Engineers of the Department of the Army commented that they have no current projects in the vicinity of the Madison Cave isopod's habitat. They further state that the effect of a potential project, the Verona Dam and Lake, would be investigated should study of that potential project be reactivated. The Service responds that detrimental effects of this project, should it be reactivated, on the Madison Cave isopod or its habitat would be unlikely. The project site is on a tributary of the South Fork Shenandoah River that has little or no influence on the locality of the Madison Cave isopod.

Comments in support of listing the Madison Cave isopod as Threatened were received from Dr. John R. Holsinger of Old Dominion University and Dr. Thomas E. Bowman of the National Museum of Natural History. Dr. Holsinger agreed with the Service's decision not to designate Critical Habitat for this species. Dr. Bowman described the great scientific value of this species and emphasized the need to protect its habitat.

After a thorough review and consideration of all the available information, the Director has determined that the Madison Cave isopod (*Antrolana lira*) is Threatened throughout all or a significant portion of its range due to one or more of the factors described in Section 4(a) of the Act.

The summary of factors affecting the species, as required by Section 4(a) of the Act and published in the *Federal Register* of October 6, 1980 (45 FR 66410-1), are reprinted below.

1. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Unauthorized visitation to Madison Cave has resulted in trash accumulation and siltation in the pools of water that are the habitat of

the Madison Cave isopod. In addition, persons standing on the steep talus banks of the pools cause the clay talus to creep into the pools (Holsinger, 1979). These factors are reducing the size and quality of the very limited habitat of this species.

2. *Overutilization for commercial, sporting, scientific, or educational purposes.* Not applicable to this species.

3. *Disease or predation.* Not applicable to this species.

4. *The inadequacy of existing regulatory mechanisms.* There are no known local, State, or Federal laws that protect this species.

5. *Other natural or man-made factors affecting its continued existence.* This species is exposed to mercury contamination from the nearby South River (Bolgiano, 1980). Since the water level changes in the pools occupied by the Madison Cave isopod are correlated with those in the South River (Holsinger, 1979), there is apparently a subterranean connection between the pools and river. The original source of the mercury pollution was an E. I. du Pont de Nemours and Company factory at Waynesboro, Virginia, which is no longer active.

Critical Habitat

Designation of Critical Habitat for the Madison Cave isopod would not be prudent. A major threat to this species is visitation of Madison Cave. Designation of Critical Habitat would require publication of a map and a precise description of the locality. Advertising the location of the cave to the general public would likely increase the incidence of unauthorized visitation.

Effect of This Proposal

Regulations published in Title 50 CFR 17.31 set forth a series of general prohibitions and exceptions which apply to all Threatened animal species. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving Threatened species under certain circumstances. Regulations governing permits for animals, fish, and wildlife are found at 50 CFR 17.32.

All of these prohibitions and exceptions apply to the Madison Cave isopod through 50 CFR 17.31, except for a special rule promulgated at 50 CFR 17.46 which would allow taking of the species for scientific purposes without Federal permits.

This rule requires Federal agencies to insure that activities they authorize, fund, or carry out, are not likely to jeopardize the continued existence of the Madison Cave isopod. Provisions for Interagency Cooperation are codified at 50 CFR Part 402.

The Department of the Interior has determined that this document is not a major rule under Executive Order 12291 and certifies that this document will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) Based on a review of information received from local landowners, the Cave Commission and State Water Control Board of the Commonwealth of Virginia, the U.S. Army Corp of Engineers, and the Farmer's Home Administration, no adverse economic effects are expected to result from this action.

This rule does not contain information collection requirements which require approval by the Office of Management and Budget under 44 U.S.C. 3507.

No adverse effects on small entities within the area affected by the rule have been identified and none are expected. No direct costs, enforcement costs, or information collection and recordkeeping requirements are imposed on small entities by the designation.

National Environmental Policy Act

An Environmental Assessment has been prepared in conjunction with this rule. It is on file at 1000 North Glebe Road, Arlington, Virginia, and may be examined by appointment during regular business hours. This assessment forms the basis for a decision that this is not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969.

Primary Author

The primary author of this rule is Dr. Steven M. Chambers, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975).

References

Bolgiano, R. W. 1980. Mercury contamination of the South, South Fork Shenandoah, and Shenandoah Rivers. Virginia State Water Control Board Basic Data Bulletin 46.

Bowman, T. E. 1964. *Antrolana lira*, a new genus and species of troglitic cirolanid isopod from Madison Cave, Virginia. International Journal of Speleology 1:229-236.

Collins, T. L. 1982. An ecological study of the troglitic cirolanid isopod, *Antrolana lira* Bowman, from Madisons Saltpetre Cave and Stegers Fissure, Augusta Co., Virginia.

Faust, B. 1964. Saltpetre caves and Virginia history. Econo Print, Falls Church, Virginia.

Holsinger, J. R. 1979. Freshwater and terrestrial isopod crustaceans (Order Isopoda). Proceedings of the Endangered and Threatened Plants and Animals of Virginia Conference, 1978.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammal, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subpart B of Title 50 of the Code of Federal Regulations is amended as set forth below:

§ 17.11 [Amended]

1. Section 17.11(h) is amended by adding the following, in alphabetical order under "CRUSTACEANS," to the list of animals.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
rustaceans: Isopod, Madison Cave	<i>Antrolana lira</i>	U.S.A. (VA)	N/A	T	122	N/A	17.46

2. § 17.46 is amended by adding a new paragraph (a) as follows:

§ 17.46 Special rules—crustaceans.

(a) Madison Cave isopod (*Antrolana lira*).

(1) All provisions of § 17.31 (a) and (b) apply to this species except that it may be taken for scientific purposes without Federal permits issued pursuant to these regulations: *Provided*, that all other Federal, State, or local laws, regulations, ordinances or other restrictions or limitations have been complied with.

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Dated: September 16, 1982.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.